The Australasian bee journal. Vol. II, No. 4 October 1, 1888

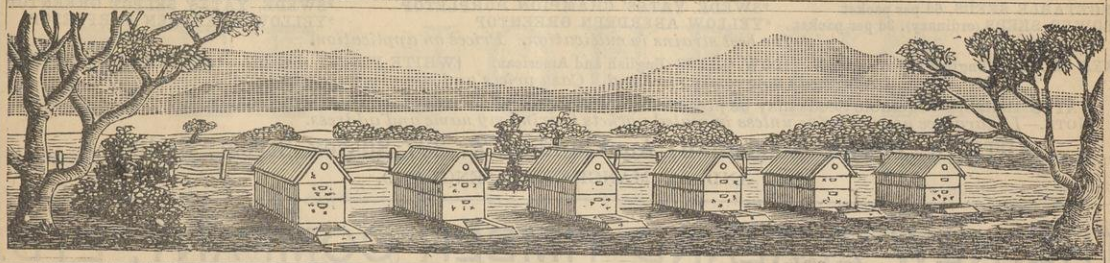
Auckland, New Zealand: Hopkins, Hayr and Co., October 1, 1888

R. J. Gribb 12/10/88.

REGISTERED FOR TRANSMISSION ABROAD.

THE AUSTRALASIAN

BEE JOURNAL



No. 4. Vol. II.] AUCKLAND, N.Z., OCTOBER 1, 1888. [PUBLISHED MONTHLY SIXPENCE.

THE AUSTRALASIAN

BEE JOURNAL

No. 4. Vol. II.] Auckland, N.Z., October 1, 1888. [Published monthly. Sixpence.

The Australasian Bee Journal.

PUBLISHED MONTHLY.

I. HOPKINS ... ... Editor.

HOPKINS, HAYR & CO.,

Proprietors and Publishers.

TERMS OF SUBSCRIPTION:

Per Annum (in advance) .. .. 6s.

Post Free on day of Publication.

All correspondence for publication and business communications to be addressed to the Editor, P.O. Box 296, Auckland, New Zealand.

Contents.

TO OUR FRIENDS.

We would respectfully remind those of our old Subscribers who have not paid their subscriptions for the current year that they are now due, and we shall be obliged by their remitting the same. Should there be any who do not wish the Journal renewed, we shall be glad if they will drop us a line to that effect. Half-yearly subscriptions taken.

Editorial.

SEASONABLE OPERATIONS FOR OCTOBER.

The present spring season in the northern part of New Zealand, from a beekeepers point of view, is the earliest we have had for many years, and if we do not get a long spell of unfavourable weather later on, we may look for large crops of honey being secured. On the 8th of last month a very large swarm of black bees, estimated to weigh 7lb, was taken and hived at Remuera, a suburb of Auckland. This is the earliest swarm we have ever known to be taken in New Zealand. For the past five or six years swarming had not commenced till six or seven weeks later. On the 16th we supered a hive to prevent swarming, as the bees were just preparing to do so. Let us hope that nothing will intervene to mar the season so auspiciously commenced.

Breeding.

Attention should be paid to the instructions already given in the two last numbers under "Spring Management" and "Breeding." An early season is favourable for equalizing the strength of colonies, that is, assisting the weaker ones by given them emerging-brood from the strongest. Be careful to have the hives made snug so that an extra cold night may not have the effect of driving the bees from the outside brood and so leave it to perish. Division boards should be looked to and be shifted as required.

Swarming.

Unless large increase is desired it will be found the best to get on the supers just before the bees commence preparations for swarming. This will delay swarming till at least some weeks later, usually until the top box has been filled with surplus honey, and where it is desirable to keep down swarming if more room be given by placing an empty super next the lower hive before the first one has become too crowded, it may be kept back still longer. Under this system when a swarm does come off it is generally large enough to occupy both brood chamber and super at once, while the parent hive takes but a very short time to recover from the loss of the swarm. There is much loss of time by allowing the bees to swarm early in the season from a single box as the swarms are comparatively small and as the weather is colder the work of comb-building cannot proceed so rapidly, neither can the parent hive recover so quickly as under the plan given above. We are in fact satisfied, after many years experience with both methods, that the former is by far the best.

Hiving Swarms.

Two or three handy little boxes somewhat larger than a candle-box should always be kept in readiness during the swarming season, and these should be ventilated by having a few holes bored in them, which should be covered with wire cloth or perforated zinc. As soon as the bees begin to settle, place the prepared hive in which the bees are to be permanently located as near the cluster as possible, taking care that the frames are an equal

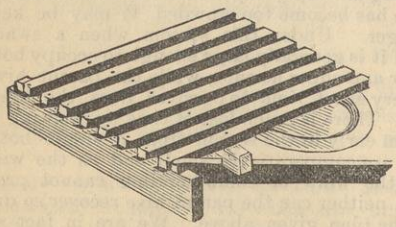
distance apart, with the mat or quilt on the top. Raise the front of the hive about two inches by means of two blocks of wood at the corners, and spread a sheet in front. The hive being ready and the bees settled, shake them into the swarming box and from that on to the sheet in front of the prepared hive, into which they will quickly enter. A few may rise and cluster again, but unless there be a large number no notice need be taken of them, as they will soon find their way to their companions. When the bees have all entered, the hive may be lowered on to the bottom board and returned to its permanent stand. By this method no time is lost, for the bees can start work right at once, and we have never had a swarm leave after being hived in this way. Care should always be taken to give a newly-hived swarm plenty of ventilation, and if the weather is extra warm the hive should be shaded for a day or two or the bees will be very apt to decamp.

Transferring and dividing are given in other columns. Queen-rearing, for want of space, is held over till next month.

Have everything ready, such as sections, extractors, tanks, spare hives, and anything else that may be required for the coming season, don't delay sending orders for any of these things till they are actually wanted for use, or you may find you have lost a good part of the best portion of the honey season through the want of a little fore-thought. Honey plant seeds may still be sown. Keep down weeds and see that nothing obstructs the entrances to the hives.

TRANSFERRING.

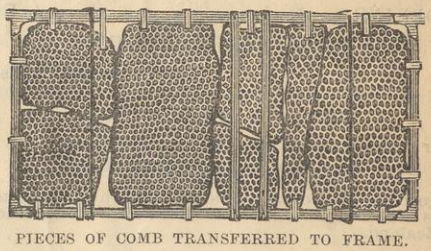
BEES may be transferred at any time during the honey season, but if the boxes of bees are on hand it is better to do it as soon as the weather is warm enough to permit of the brood being handled without risk of getting chilled. Honey should be coming in, or combs cannot be built out otherwise unless the bees be fed, but rather than do that it would be better to postpone the operation for a while. Usually, early in October is a very good time to commence. The hive you are going to transfer the bees to should first be prepared by putting sheets of foundation in all the frames but two, which will be required to transfer the brood combs to. Some transferring wires will next be necessary, probably a dozen or more for each, which should be made out of fairly stout wire (No 16 gauge). They should be cut an inch longer than the depth of the frames and be bent at right angles thus ⌐— half-an-inch from each end, so as to grip the top and bottom bars when put in their places. Having provided yourself with a long knife, smoker, a hammer and chisel to knock the box hive apart, and an empty box, you are ready for the operation. A transferring board like that shown below is a very handy implement, and is worth the trouble of making, especially where there are a number of box hives to transfer. Some three-eighth inch strips of wood twelve inches long nailed to a bearer three-quarters



TRANSFERRING BOARD.

of an inch apart, as shown in the figure, and of a width to take a frame, is all that is required. The spaces between the strips allow of the wires being fixed on the lower side of the frame without moving it.

The best time of the day to transfer is in the morning when the bees are working briskly; choose a fine warm morning. With the hive and the appliances at hand and the smoker well going, blow a few puffs of dense smoke nto the box hive and remove it a few feet back. Now place the new hive on its stand exactly where the box stood and take out the two empty frames. Blow another puff or two of smoke into the box hive and turn it bottom up so that the bees and combs are exposed. Lay a cloth over one end of the box and drive the bees with smoke from the other end towards it; they will cluster under the cloth and very few will fly; those that do will alight and enter the new hive, which should have its cover on. When several of the combs are fairly clear of bees run the knife down the ends of them to detach them from the box; break out one end of the latter without injuring the combs to make the way clear for cutting them free from the bottom. When this has been done, cut out the combs, shaking or brushing what few bees there may be on them back into the box or down at the entrance to the new hive. Combs containing honey only should be put into a covered box or under cover where robber bees cannot get at them; those containing sealed brood should be laid in a cloth till there are sufficient to fill a frame when they may at once be put into it. Cover the box with a cloth in the meantime and lay the frame on the transferring board. Now cut the combs to fit it and fasten them securely with wires on each side, as shown in the following engraving: then hang it in the centre of the hive



PIECES OF COMB TRANSFERRED TO FRAME.

Proceed in the same manner till all the brood has been transferred, taking care to transfer only such worker brood in combs that are perfectly straight. By this time the bees in the box will be nicely clustered at the end. Fix the frames properly in the hive with the mat and cover in their places, and prop up the front of the hive an inch or so off the bottom board; lay a cloth down in front and shake the bees from the box as near the entrance as possible as you would a swarm. As soon as the bees are all in set the hive down and leave them to repair damages. In a day or two the transferred combs will be secured to the frames when the wires may be removed.

Should there be little or no honey coming in when transferring is taking place robber bees will be attracted. A bee tent to operate under will then be useful. Clear away all pieces of combs and everything that will tend to entice robbing after the transferring is finished.

THE FOUL BROOD BILL.

EVERY progressive apiculturist in this colony will regret the non-passage of the above bill during the late session, owing to circumstances over which the member in charge of the measure had no control. It is, however, a source of great satisfaction to the promoters of the bill, and to beekeepers generally, to learn that no obstacles were thrown in its way by the House, or any individual member thereof. So far from this being the case, we think it is safe to say that no local bill—for such it was when introduced, notwithstanding its public character—has ever been received with greater general favour in the House, or one that obtained more voluntary offers of support. At first the nature and objects of the bill were little understood, although it was recognised that it was almost unique in its lucid and simple provisions; but this lack of knowledge did not long exist after the bill became printed and circulated, as most of the members representing country districts received

communications from numbers of their constituents not only requesting them to support it, but also containing valuable information on the subject with which it was intended to deal. The promoters of the bill were also highly eulogised by individual members of the House on the simple and effective machinery provided for working it, and it was said to be almost the first bill of a kindred nature which did not need the creation of a department to administer its provisions if it became law. When all were so satisfied it would be almost individious to mention names, but among its most enthusiastic supporters were Sir John Hall and Messrs. Bruce, Rangatiki; McArthur, Manawa'u; Turnbull, Timaru; Fulton, Tairie; and T. Thompson, Auckland. It is more than probable had Mr Lawry applied to the Government at an early stage of the session they would, on his request, have taken the bill up as a Government measure; but many of his friends were opposed to that course, as they were convinced it would pass the House without a division and they were anxious that he should obtain the credit of having introduced it. As it was, some of Mr Lawry's friends asked the Colonial Secretary to take it up when they saw that as a private member's bill it was bound to be blocked out. We repeat, it is a source of regret that it eventually fell with "the slaughtered innocents," but it is, nevertheless, satisfactory to know that this was not the result of any hostility, and as it has been before the House under such favourable auspices, there is every reason to hope that next session it will obtain that success which is the reward of merit.

VICTORIA.

Manufactured Honey in Melbourne.

Mr R. J. Kendall, who is now in Melbourne, very kindly sent us the following paragraph clipped from the *Melbourne Age* of September 12th, in which it will be seen that a monstrous fraud has been perpetrated by a tinning company, in putting up for sale as pure honey, a mixture containing 40 per cent of glucose:—

"A case of selling adulterated honey was brought under the notice of the Collingwood Bench yesterday, when R. W. Kennedy, grocer, Smith-street, was charged by Inspector Taylor, of the Central Board of Health, with the offence. It transpired in evidence that Taylor visited the defendant's shop some time ago, and seized a number of tins of honey, in consequence of Mr. Blackett, Government analyst, stating that they contained a large percentage of glucose. About a month afterwards Mr. Taylor again visited Kennedy's shop, and seeing some of the tins of honey on the shelves, asked the salesman to sell them. This he refused to do, consequent upon instructions from his master. Under pressure, however, he sold a tin, and this was submitted for analysis. Mr. Dunn, who examined the honey, declared it was very inferior, and contained 40 per cent. of glucose. Mr. McKean, for the defence, urged that no *bonâ fide* sale had been effected. He also contended that the tins bore the label of the Red Cross Preserving Company, and that the company manufacturing were responsible. Mr. Alley, P.M., thought that a great fraud was being practised on the public in selling this honey. He considered, however, that the defendant was not to blame, and that steps ought to have been taken against the Red Cross Preserving Company. The case was therefore dismissed.

QUEENSLAND NOTES.

The editor of the Bee Department of the *Journal* of the National Association of Queensland, in the August number, says:—"A new start has been made in adopting the objects and rules of the New Zealand Beekeepers' Association as a model for ourselves, thus doing away with our own rotten hazy rules, and showing clearly what the Association exists for, and what it intends to accomplish."

In the prize list for honey, bees, and apiarian implements, of the late Centennial Exhibition held in Brisbane, we notice two of our subscribers, Mr. D. R. McConnell and Mr. J. Cary, have figured well, the former gentleman taking no less than five first and one second prizes, with a silver medal for the whole class, and the latter gentleman two first prizes. Mr. Cary was fortunate in securing a large crop of honey last season, having taken about eight tons from 120 hives, autumn count, and as he secured first prize for extracted honey, we may conclude it was of excellent quality.

The office-bearers of the Queensland Beekeepers' Association for the current year are nearly the same as last year. Mr. Isambert, M.L.A., has again been chosen to fill the presidential chair of the Association.

LECTURE ON BEEKEEPING.

Mr. C. B. Morris, of North East Harbour, Otago, a practical and experienced apiculturist, delivered a lecture on the above subject to the Anderson's Bay (Otago) Mutual Improvement Literary Society, in the Schoolhouse, Anderson's Bay, on the 11th July. The building was well filled. The Rev. A. Cameron occupied the chair, and briefly introduced the lecturer.

Mr. Morris (who was received with applause) gave a condensed account of the natural history of the bee, described the varieties of honey bees, and their characteristics. He graphically and clearly sketched the different members of the colony—queen, workers and drones, and their several functions and respective modes of performing their duties. The products of the bee, how to manage the bee, the hive, and the various modern appliances of the apiculturist, were all in turn described and explained. The best modern hive, (Hopkins's Improved Langstroth) and the obsolete (for beekeeping purposes) gin case, were compared, and their respective merits and defects explained. Mr. Morris explained the procedure of swarming, and described the method of securing the swarm. The manipulation of bees, their food, enemies, diseases, and remedies to be employed to prevent and cure disease were all thoroughly explained and illustrated.

Mr. Morris had large and carefully prepared diagrams illustrating the points of his lecture, which added much to the interest and greatly simplified matters, especially for the younger portion of the audience. He had also on view a Langstroth hive with all its adjuncts, section boxes, frames, etc. An extractor, and many other beekeepers appliances, were also exhibited and ex-

plained. These articles were examined with much interest by many of the audience. At the conclusion of his lecture Mr. Morris, in reply to questions, further explained points which had not been quite clear to members of the audience, and answered many questions upon the practical work of the beekeeper giving many valuable hints. The lecturer was listened to with very great attention, and at the conclusion of his most interesting and instructive paper was accorded great applause.

Mr. Fitzgerald, Rector of the Dunedin Training College, moved a hearty vote of thanks to Mr. Morris, which was carried by acclamation.

NEW ZEALAND BEEKEEPERS' ASSOCIATION.

THE usual monthly meeting of the Executive Committee was held at Hopkins, Hayr and Co.'s office on Friday, September 14th, at 2.30 p.m., Mr. F. Lawry, M.H.R., President, in the chair.

The meeting had been postponed from Friday, the 7th of September, to allow of the President being present on his return from Wellington.

The minutes of the previous meeting having been read and confirmed, the Secretary read a letter received from the Minister of Public Works in reply to one sent by the Association, requesting more equitable charges for the carriage of honey and bee appliances over the railway lines of the colony. The Minister expressed regret that he could not see his way to alter the present tariff. The Committee considered the matter had not been fairly dealt with, and they thought that the industry of beekeeping should at least have been put on an equal footing with other rural industries. Some of the Committee were of opinion that the tariff would not be altered on any account, pending the appointment of the railway commissioners. The newly-printed rules of the Association were laid on the table, and the Secretary stated that he would shortly send them out to members.

The President gave a very clear account of the various circumstances that occurred to prevent the passage of the Foul Brood Bill through Parliament, which he regretted, and expressed his conviction that there would be no trouble in getting it through next session.

The Secretary drew attention to the article by Mr. Mulvany in the September number of the *Bee Journal*, and stated that the second on the same subject would appear in the October number. Several members spoke in praise of the clear and thoughtful manner in which the writer had dealt with the subject he had taken in hand, and believed the opinions of a writer so well known and respected among the beekeeping fraternity of Australasia would have great weight in bringing about a clear understanding as to what is needed for the welfare of the beekeeping industry in these colonies. It was decided to postpone discussion of the subject till Mr. Mulvany had concluded the articles.

The question of promoting a beekeepers' convention was next discussed, and the meeting was unanimous in agreeing that if there was any chance of success it would be a most desirable thing for the committee to undertake. Several opinions were given as to the best time for holding a convention, and it was finally decided that some time in the month of March would be most suitable, as beekeepers, who were generally more or less interested in farming as well, would be able to spare the time to attend when farming operations were quiet, as they would be at that time of the year. It was finally resolved that the secretary by advertisement or otherwise do call the attention of members and beekeepers generally to the proposed convention, for the purpose of ascertaining what number could be depended upon to attend some time in the month of March next. A vote of thanks to the Chairman concluded the meeting.

IS THE VENTILATION OF HIVES AS YET PERFECTED?

BY J. R. M.

(Continued from page 39.)

III.

IN all cases, where certain forces of nature, whose ordinary laws are well known, are exerted under certain known conditions, the possible extraordinary modifying effect of which has not been proved by actual experiment, the ordinary laws must be, in common prudence, supposed to act with all their ordinary results, until such extraordinary modifications have been proved. In previous numbers of this *Journal* what is known to be the normal effect of wind on a box of the size of a hive, has been urged as its certain effect on a hive, making a reasonable allowance for the heating powers of the bees within: and it has been taken for granted that such is the result until experiments shall prove some extraordinary exception in the case of a beehive.

In the September number a series of experiments were suggested to set the matter at rest, and by way of providing for uniformity in carrying out experiments. If they seem to be reasonably exhaustive, and adapted for the end, the writer purposes to conduct a series himself this year, if not suitable on the plan accepted by the Beekeepers' Association.

Similarly, in previous numbers, the necessary effect of the motive power evolved by the internal temperature of the hive, raised as it is by the bees, as compared with the outside temperature, was urged as the certain effect, unless actual experiments should show that it is modified to a greater extent by the hive and bees than can be reasonably supposed.

The conclusions drawn from the known laws as to the rapidity of the ascent of a column of heated air, surrounded by colder air, were given in No. 10, Vol. I.; and to take the extreme case, where the hive entrance is in the aggregate one superficial inch, and the aggregate of the interstices of the mat the same, the whole air in the hive would be changed twenty times every hour (even allowing two hundred per cent. for extraordinary obstructions) on a frosty night. Per contra, in summer, when most ventilation is needed, the air is changed less and less frequently as the shade temperature approaches 85°, when, as far as this motive power is concerned, things are at a standstill.

Before suggesting a series of experiments to set this question at rest, it has become necessary, owing to friendly criticism, to deal with certain *a priori* objections to the conclusions drawn. To the conclusions drawn it may be objected—

(*a*) *That a chimney and a beehive differ too much for calculations true in the one case to be applied to the other.* They differ, but do they differ in those points which affect the laws in question? In each case there is a lower opening, an upper opening, and a heat-producing power within. The fact that there is an enlargement of the 'bee chimney' in the middle, where the heat producing power resides, can in no way affect the main results, any more

than an enlargement in a water pipe would affect the passage of water through it.

(*b*) *That the percentage allowed (two hundred per cent.) for extraordinary retarding circumstances is not enough.* It is a very large allowance for loss of energy for no very grave reason, and, as a matter of fact, under what actually was allowed. The exact normal rate shall be given in the next number, after verifying the formula. However, even if experiment should show that double that percentage should be allowed, the cooling down of the hive on a frosty night is a great deal too much to be good. Let experiment decide the question.

(*c*) *That even if the results are what are stated, it is no great matter, for a variation of temperature from below 50° to 110° and even 112° is not fatal to bees or brood.* The question is of the *perfection* of existing ventilating arrangements, and not whether the bees can shift with the existing ones.

(*d*) *That the total superficial extent of the ventilating holes covered with perforated zinc, say, half-inch, and not that of the interstices of the mats, is the limiting power.* True, this was overlooked. However as regards ventilation in hot weather, it affords an additional argument for the need of 'perfecting' existing arrangements. As to its retarding the excessive movement of the air on frosty nights, the case still remains alarmingly dangerous and injurious to the bees. For even with a half superficial inch inlet and outlet, with the thermometer at 30° outside, *normally, i.e.*, without any allowance for retarding causes, the ascent of the air will derange the whole contents of the hive every two minutes, and that much allowance has to be made has yet to be proved.

(*e*) *That it cannot be conceived as desirable under any circumstances that the air should be changed every half minute.* Take a very hot summer day, with the thermometer in the shade at 80° to 85° (nothing very unusual); the bees in all their activity, and throwing off carbonic acid gas rapidly, their numbers, too, at the maximum, would they not, according to the known laws of respiration, etc., be better if working in pure air, when the air temperature is sufficiently high of itself, not to require artificial help, to hatch out the brood and ripen honey?

(*f*) *That the reading of the thermometer in the shade, not the sun, is the true degree of temperature with which we have to deal.* This is true; but in Australasia the shade temperature is sufficiently often 80° to 85° for this to make no difference to the argument.

However, in dealing with the movement of the hive air owing to the difference of temperatures inside and outside, we are dealing with a very different power to that of the wind, which varies from 1oz. to 50lbs. pressure on the square foot; and although we seldom have to deal with the former power alone without the latter, it may be very likely that experiments will show that the former requires but little to regulate it. Yet for all this, the known law of the persistent rise of the 'chimney' air on a frosty night, when the difference of temperature is 40° to 50°, holds good until disproven: and it is the writer's private opinion that the susceptibility of bees in scientific hives to diseases is due to the lowering of their general health by the cold they experience in cold summer nights, and in winter—a degree of cold which he suspects is very far greater than beekeepers take for granted is the case.

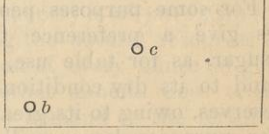
It remains, then, only that a system of uniform experiments should be suggested, so that a more complete and exhaustive set may be suggested, if the ones offered are insufficient. This all who are disposed to carry on the experiments will add statistics to a common fund, and aid in eliminating errors and miscalculations.

SERIES OF EXPERIMENTS, NO III.

Object.—*To ascertain the effect of the difference of temperature inside and outside of a hive due to the heat evolved by the bees.*

These experiments must be made only in perfectly still weather, as a wind would at once introduce a disturbing element. The results could with advantage be noted once every hour from early morning to midnight, and if possible also about 4 a.m., which is normally the coldest time in the 24 hours. Thus the gradual rising and falling of the outside temperature would be in a most interesting way accompanied by some variation, presumably of the temperature in different parts of the hive.

The three kinds of hives should be, it is suggested, the same as for the Series of Experiments, No. II., partly to save injury to the bodies of other hives, and partly to enable the two sets of experiments—the one with the wind, and the other in still weather—to be made on exactly the same colonies, and therefore, as nearly as possible, under the same conditions. Let *x* be the letter by which is known a strong colony, on all ten frames; *y*, a colony covering only five frames, but without any contracting board; *z*, the same with a contracting board; and *xx*, a colony covering pretty well twenty frames. The position also of the thermometer should be the same, and lettered the same, *i.e.*, placed so as to register—*a*, the temperature



in the shade, outside; *b*, the temperature at a distant low corner; *c*, the temperature near the clustering bees, half-way up; *d*, the temperature in a distant upper corner; *e*, the temperature at the top in the centre, near the clustering bees; and *f*, the temperature right in among the bees, by letting the bulb descend through the mat.

Should these arrangements for the thermometer, etc., be considered as sufficiently good, and not be superseded by better ones by friendly critics, the writer hopes within a month or so to forward to this journal some statistics, as observed by himself, in the hope of thus helping to decide questions, which it seems to be allowed on all hands are at present almost absolutely undecided, in a satisfactory way;

and the importance of the deciding of which he has urged on *a priori* grounds.

With regard to the mats used, the width of inlet, and the operations in the tops, each observer would have to make a note of the same, so as to enable other observations to be properly compared and corrected.

[We trust that some of our subscribers may be found able and willing to co-operate with our esteemed contributor, "J.R.M.," in carrying out the series of experiments he suggests. The ventilation of hives has not so far, as we are aware, yet been *thoroughly* investigated, and it is most important that we should know whether we are pursuing a wrong system or not. Unfortunately our time is so occupied away from our bees that we cannot assist or we would willingly do so.—ED.]

(To be continued.)

CAN HONEY BECOME A STAPLE COMMODITY?

BY T. J. MULVANY.

(Continued from page 40.)

LAST month I endeavoured to dispose of the negative assertion, that honey can never become a staple because it is not a *necessary* of life; I now propose to show that there are reasonable grounds for maintaining the positive view, that it can and may be made such a general and regular article of trade.

In the first place I think it is indisputable that pure extracted honey possesses (as I have already hinted) all the useful qualities which tend to make the sugar of commerce an article of such general use, and in addition, some which the ordinary cane or beet-root sugar cannot possess. It can be used with equal advantage for nearly all purposes for which sugar is commonly used, such as sweetening tea, coffee, or other drinks, stewing or preserving fruit, making pastry, and in cookery of all kinds, and in the preparation of fermented drinks such as hop-beer, mead, metheglin, fruit-wines, etc. For some purposes people will probably always give a preference to refined or crystallised sugar, as for table use, owing to its appearance and to its dry condition—or for some jams and preserves, owing to its greater clearness; but for other purposes honey will be found to deserve the preference, and for *all* it will be found quite serviceable at a pinch. If any one doubts this, let him only make a trial and satisfy himself. Honey was used as the natural sweet for thousands of years before sugar was known, and the latter being, in point of fact, only a substitute for the former, there can be no reasonable doubt that it, the original article, may again, wherever practicable, be used with advantage instead of its substitute. But it has besides the advantage, as scientists tell us, of preserving the sweetening power in a form better suited for human food; and it may also be used as a substitute for butter, syrups, and other condiments in a way that sugar is not at all suited for.

If, then, it be granted that honey possesses, in at least an equal degree with sugar, the intrinsic qualities which make the latter a staple of trade, what are the other conditions necessary to fit it also to become a staple? They are, I think, two-fold; first, that it shall be produced in sufficient quantity; and second, that it shall be procurable at a cost but little, if at all, dearer than sugar.

For the fulfilment of the first condition it is, of course, not necessary that there should be as much honey produced as there is now sugar consumed. No reasonable person can expect that it will ever entirely supersede the use of manufactured sugar; but only that it may, to a great extent, be substituted for sugar, in cases where it obtains a preference according to the taste of some people, or where it can be more easily or more cheaply obtained. That it can, under the new system of apiculture, be produced in enormous quantities—sufficiently large to fit it to be an article of general traffic, may, I think, be assumed to be admitted.

The second condition is, perhaps, the more important one, and that about the possible fulfilment of which there is more likely to be some difference of opinion.

To what an extent the consumption of such an article as sugar is influenced by the question of price may be easily seen by a reference to the statistics bearing on that subject. Mackenzie, in his work published in 1880, called "The Nineteenth Century, a History," shows that, in Great Britain, from the commencement of the war in 1791 up to the repeal of the corn-laws and introduction of a free trade policy in 1845, sugar and tea were so taxed that the consumption of these articles per head of the population, remained very small and almost unaltered; but in the thirty years from the latter date to 1875, "the use of sugar had more than trebled, having risen from 15 to 51lbs per head; and tea had undergone a similar increase, from 1¼lb to 4lbs." This increase in consumption is about in the inverse proportion to the decrease of price—sugar and tea being now less than one-third of the price at which they stood prior to 1845. I recollect perfectly well when the grocers' windows used to display, in the most enticing manner, samples of their "wonderfully cheap" teas, at 5s 9d to 7s per lb; and of soft or brown sugars at 7d to 10d, and loaf sugar at 1s to 1s 0½d per lb; and when the lowest priced sugar so exhibited was about the colour of treacle and the consistency of sand, and was indeed generally believed to contain a considerable proportion of that not very nutritive substance. Now we see every day, teas advertised at 1s 6d to 2s 6d per lb, and sugars at 2½d to 3½d or 4d, the better sorts of the latter being as white and as well refined as the old loaf sugar. These prices being a good deal lower than those which ruled in 1875, the last year referred to by Mackenzie, the consumption has accordingly increased since then also—that of tea from 4lbs to 5lbs, and that of sugar from 51lbs to over 70lbs per head of population.

Before honey was produced in any quantity in New Zealand, say only seven or eight years ago, the imported Californian extracted honey was sold in 1lb and 2lb tins at a shilling per pound; and

the first New Zealand honey, when placed on the market in small quantities, made up in 1lb or 2lb tins or bottles, was easily sold at the same price, while comb honey was readily bought at a shilling or more per section of one pound. The home article being quite as good as, or better than the imported, naturally took its place on equal terms as to price, as an article of luxury. No one, of course, then thought of setting up a competition with sugar, so long as the honey could be sold at three or four times the price of that article. But it was soon found that there was only a very limited demand for honey at those prices, and the necessity became at once apparent of finding a market for extracted honey in bulk. The idea of exporting it, at least until a sufficient home demand should be developed, naturally suggested itself. Extracted honey of best quality was then saleable in England at sixpence per pound, the supply coming chiefly from the United States, where the local market price was then also fivepence to sixpence. But with increased production and competition prices ran down rapidly until at last Californian extracted honey was being placed on board ship at 2d to 2½d per pound, for export in large quantities. Here in New Zealand we had no difficulty in obtaining sixpence per pound for extracted honey in bulk, for the first year or two, but in order to compete for export we soon found that we must be content with fourpence, or less; and the local market price has at length fallen to 3d or 2½d for sales in quantity (not to speak of lower prices still for which honey has been sacrificed, if sold by auction without reserve); that is to say, the prices, as far as the producer is concerned, have actually fallen below the ordinary selling price of good sugar.

These questions then arise for the producers of extracted honey. Seeing that it can no longer be treated as an article of luxury, to be sold in small quantities at high prices, can it be made a staple of consumption, placed within easy reach of all consumers, just as sugar is, and at nearly equal price? and can the producer, by strict economy in the apiary, and by increasing his production to the utmost, make his business pay at the low price at which he must sell, to admit of this competition with the sugar prices in the retail market? These, I repeat, are the points I wish to submit for the serious consideration of all those who go in for the production of extracted honey in bulk.

My own belief is that such a course is practicable if all the interests concerned—producers, agents or middlemen, and retailers—will consent to treat the article as sugar is treated; that is, put it on the market in suitable cheap packages which shall add as little as possible to the prime cost of the honey, and deal in it at such reasonable rates of commission or profit as is done in the case of sugar. No doubt, even under the best arrangements for marketing, honey will still be handicapped by an extra cost of probably one-third or one halfpenny per pound for tin or other packages, as compared with dry sugar in matting or bags; but on the other hand, there is to be considered that the capital required to be sunk in plant, etc., is small in the case of apiaries as compared with sugar factories, that there is no annual expenditure necessary for the raw material (cane or roots) to be operated upon, and that the apiarist has mainly to take into account what he may consider a sufficient remuneration for his own labour and skill in estimating the prime cost of his produce. Considering then that the occupation has many charms for those who have a natural taste for it (and only such are at all likely to succeed in it), and that it does not so completely take up a man's time as to prevent him from attending to other matters for a considerable portion of the year, it appears to me probable that enough of people would always be found to follow the industry if they could only see their way to a certain and ready sale of their produce even at the low prices indicated above. But there is no use, I believe, in contemplating any half measures in this matter. Any attempt to open an extensive market, and at the same time to keep up high prices, must prove illusory. The producer of ordinary extracted honey must make up his mind, once for all, to be content with about the same low price for which the best quality of sugar is actually produced; and the supplying of such articles of luxury as comb honey and white clover extracted honey, in small and attractive packages, must be left in other hands, and to be dealt with on entirely different commercial principles.

The foregoing reasons why, as I conceive, honey *may become* a staple commodity, are of general application to most countries; but if they have any weight in the case of a great sugar-producing country like the United States of America, how much more strongly must they apply to New Zealand, which is not, and I think is not likely to become, the seat of plantations for the raw material of sugar. Every pound of honey which can be here substituted for imported sugar is, *prô tanto*, a natural gain. This is perhaps a more striking advantage in the case of honey than in that of any other product that can be mentioned. The honey produced in a country is *all pure gain to the nation;* not diminishing the natural resources in any way, as the extraction of every ounce of gold, or every ton of coal or other mineral does to some extent, nor making any demand on the fertility of the soil by taking from it any substance that requires to be returned to it, as wheat, wool, and flesh meat do when made articles of export, or as even the growth of canes or roots for the manufacture of sugar. The "raw material" of the honey is constantly and abundantly provided in the laboratory of nature, from the inexhaustible resources of the atmosphere, and requires only a moderate amount of human skill and industry to collect it by the proper direction of the "free labour" of an insect which can be easily increased and multiplied to any desired extent, not only without injury, but with decided advantage to all agricultural operations.

Bees may always be made peaceable by inducing them to accept of liquid sweets.

JOTTINGS.

BY LAMH DEARG ERIN.

IT is a great pity that the Foul Brood Bill was numbered amongst the slain at the end of the session. Had it been in force now, enthusiasts in the cause would have been able to have enforced some of its most useful clauses ; as it is, foul-brood gets another lease, and careful apiarists can do another growl. So bogus honey has found its way to Melbourne ; that looks well ! *It has been in New Zealand some time.* Beekeepers, for goodness sake be alive to your own interests, ferret out these frauds, show them up, don't be afraid to speak, or to take the trouble, when ever you get a tin of suspected honey, to get it analysed, and let the editor of this *Journal* have the result of your investigations. "At a recent Brewers' Exhibition in England a process of preparing wort was shown, consisting in the inversion, in suitable boilers, of starch by means of *oxalic acid*, which could readily and completely be removed. It was quite plain, therefore, such 'syrups' could and were made free from acid, but as long as starchy matters were employed there would not be the slightest difficulty of distinguishing the product from honey. It was only when cane sugar was brought into use that the chances of detection would be small." Fancy a man preferring the above compound to pure honey, and yet how many of us have eaten something akin to the above-named mess in those days of blissful ignorance before we took to beekeeping, and found out the true taste of good honey ?

How is it that the adulterated honey is sold in such large quantities, and little or no effort is being made to obtain the genuine product of the bee ? The excuse is—pure honey is too expensive to ensure for it a ready sale. If the public can get an article sweet enough to suit their palates, quantity will be considered before quality. Is fourpence a pound, in bulk, too expensive ? A lot of honey last season was sold for less than that at auction. Taking trouble and a man's time, expense of hives, foundation, cost of tinning, labelling, etc., into consideration, I think it is uncommonly cheap. Some salesmen have expressed an opinion that this spurious honey is not detrimental to health. In my humble opinion, if the gummy, unfermentable, and probably indigestible matter that is contained in some of the starch and corn syrups that go to make up the *base* of spurious honey is not injurious, well—the man who prefers cheap and nasty ought to have a digestion like an ostrich, or else take a pepsin pill with it.

I note that mention was made at the last meeting of the Association of holding yearly a Beekeepers' Convention. Now that is something like 'biz.' if we could only get one up. The great drawback will be for members of the beekeeping fraternity being able to attend, mainly on the score of expense, as some of those who take a keen interest in an affair of this kind, live a good distance from Auckland. If arrangements could be made with the steamship companies for a reduced scale of fares, then I have no doubt we should get a big meeting. It is just the very thing we want, where beekeepers of all shades of opinion will meet and discuss matters of vital importance to beekeeping. It will be there where samples of spurious honey can be shown, and if need be, tested ; and in conjunction with the convention a bee and honey show might be held on one of the days, at which a small charge might be made so as defray, to a certain extent, the expenses of the exhibition.

This season is the earliest for bees I have known for some time. I noted drones flying on the seventh of this month, and I find several queen cells already started. My earliest swarm last year was on the 20th of October, and drones were not seen until the 21st of September. There will be an Industrial and Art Exhibition held at Waipawa on the 5th of December, where I hope to see some of our local beekeepers show up.

[Our friend says emphatically that bogus honey has "been in New Zealand some time." Will he say whether it has been offered for sale, and if so, where it is to be purchased ? for we feel inclined to make it as warm as we can for any one found to be selling spurious honey in any part of these colonies.—ED.]

QUEENSLAND JOTTINGS.

BY C. C. CUSACK.

THE past winter has been the coldest and driest—not more than half an inch of rain having fallen within the past four months—that we have experienced for some years ; consequently, the bees are in rather a backward state. The winter has been too cold to allow brood-rearing to be carried on to any great extent, though not sufficiently cold to prevent the bees from flying every day, which has caused some of the stocks to dwindle down very much. However, now that warm weather has set in (the thermometer has been up to 80° in the shade), brood-rearing is going on apace.

The coming season in this colony promises just now to be a good one, and it is to be hoped we shall have favourable weather through the honey flow. The Queensland blue gum *(Eucalyptus terticornis)* is in full bloom, also odd trees of the stringy-bark *(E. acmenioides)* and iron-bark *(E. erebra)* are in flower, so that sufficient honey is being gathered to supply the bees for brood-rearing. The flax-leafed wattle *(Acacia longifolia)* is one mass of bloom, making the bush quite gay with golden blossoms, and scenting the air with its strong perfume. It appears to yield pollen only, which the bees will not touch when they can obtain pollen from other sources. I believe the reason of this is on account of the pollen grains being extra large, and when examined with a microscope appear to be coated with a very thick, strong skin (the extine), which would render them difficult of digestion. This explains, I believe, the preference that the bees show for one kind of pollen over another. The flowers which yield pollen grains with thin husks would naturally be more eagerly sought after—their chemical con-

stituents being the same—rather than those yielding pollen grains with thick husks.

* * * *

At the second annual meeting of the Queensland Beekeepers' Association, held last week, the rules of the New Zealand Beekeepers' Association were almost entirely adopted in place of the former rules of our Association, as being better adapted to the functions of the Association than the rules formerly in use.

Our Association has not met with that support by the beekeepers which beekeepers' associations deserve, partly, no doubt, owing to its having been started on wrong principles—the objects of the British Beekeepers' Association being followed too closely.

Beekeepers would do well to profit by the example which is set them by their bees. There is no greater example of what can be accomplished by co-operation and division of labour for the common good than in a hive of bees. If each bee were to labour solely on its own account, quite regardless of the work of others, the hive would soon be in a state of hopeless confusion, and all work would soon come to an end.

* * * *

The Flavour of Honey Partly Due to the Brood Combs.

In the last June number of the *American Bee Journal* appears a very interesting and instructive article, "The Medicinal Qualities of Honey Explained," by E. A. H. Grimshaw. Mr. Grimshaw attributes a great deal of the medicinal properties and flavour of honey to the pollen it contains. That pollen does greatly flavour the taste of honey I know for certain. My honey, as it comes from the extractor, is emptied into deep tanks, holding about half a ton each, in which the honey stands for several days to allow any particles of wax, etc., that it may contain to rise to the top before the honey is drawn off at the bottom. The tank is never emptied to within less than four inches of the bottom till the end of the honey season, unless there is a change in the quality of the honey being gathered. At the end of the season the last two or three inches of honey taken from the tank, if several tons have passed through it, is quite cloudy with the amount of pollen grains it contains, and has a very strong taste of pollen. This honey candies through the winter, and when melted again loses a great part of its rank taste. It is just possible that this explains why honey loses its flavour slightly when heated: the heat may change the pollen grains chemically or drive off their volatile essences.

I have long been of the opinion that honey stored for some time in comb that has been used for breeding purposes is denser and darker coloured, and of a better flavour, than that which is stored in combs from which brood has never hatched. The extra denseness is due to some of its moisture being absorbed by the cast skins—or cocoons, as they are generally, though erroneously, called—of the larva lining the cells. The cause of the difference in flavour of honey stored in brood comb to that stored in comb which has never had brood raised in it, is due to the honey absorbing some of the matter contained in these cast skins and the residue of undigested food which the larva leaves behind when it emerges from the cell. If a brood comb is filled with water, in a few hours the colour will be changed from black to a greyish white, and the water will be coloured a light amber and have a strong taste, showing that the brood combs readily part with a quantity of their colouring matter. Analogy would lead us to believe that honey, being chiefly composed of water, would likewise have its taste and colour altered by being in contact with brood cells. We know that there is some matter in brood combs that alters the colour, taste, and smell of wax when melted down in contact with it, and that this matter which the wax takes up is exceedingly volatile, as is seen in the readiness with which wax parts with its taste, colour, and smell when exposed to the air.

The superior flavour of honey that has remained in the hive for some time may possibly be attributed to this cause. If by leaving honey in the hive for a time it acquired a flavour which it formerly had not, it proves that the honey must have had something added to it to give it this different taste—provided that it has not altered chemically, which is unlikely.

There is a sort of vague, hazy idea amongst beekeepers that the superior flavour honey acquires by being left in the hive is due to something it absorbs from the bee while the bee removes it from cell to cell. Then let me say that this removal from cell to cell is greatly over-estimated, and in the greater quantity of honey stored never takes place. There are times when the honey is very thin and watery, and when the atmosphere is charged with moisture, the bees may remove it from cell to cell; but when the atmosphere is dry and the honey is coming in fast, I doubt if it is ever removed from the cell it is first stored in by the bee bringing it from the field. It would not be necessary for the honey to be in contact with the brood cells to acquire this flavour, though the honey thus in actual contact would probably be stronger flavoured, as the volatile matter given off by the brood combs may be absorbed by the honey in the hive.

There is at certain times in the apiary a strong, pleasant aromatic odour quite distinct from honey, which odour I have heard beekeepers attribute to the secretion of wax; but it will be observed that this scent is present when there is no secretion of wax taking place to speak of, and this scent varies in strength according to the extent of brood rearing. Careful observation has led me to believe that it is entirely due to the brood combs and the larvæ they contain.

An analysis of such combs, or water which has been coloured by the matter they contain, will show what this substance is. It is probably composed chiefly of matter derived from pollen.

Indooroopilly, Queensland.

[We are very pleased to learn that the Queensland Beekeepers' Association has turned its attention

to the practical side of beekeeping. The time has arrived when beekeepers' associations—if they are to be of any service to apiculture—cannot afford to be sentimental. We have too many difficulties to grapple with to allow of any time for sentiment until they are removed. It is all very well, no doubt, for an institution like the British Beekeepers' Association—whose members are quite independent of beekeeping, and who only practise it for pastime—to indulge in sentiment, it can afford to do so; but the practical beekeeper, the man who is leoking for his bread and butter from his bees, looks to the Association he helps to support for practical assistauce in overcoming difficulties, not to create them, as the British Beekeepers' Association is now doing. No doubt the British Beekeepers' Association did a great deal of good in times past by spreading a knowledge of advanced bee culture when honey could be readily sold in England at from 1s. to 1s. 6d. per lb.; but now that it can be bought for one-third or less of that sum, and beekeepers find a difficulty in disposing of their crop, it is doing the industry a serious injury by encouraging every cottager to swell the ranks of honey producers. It is just the same with the *British Bee Journal*, a monthly edition of which has just been started, at 1s. 6d. per annum, solely with the view of encouraging cottagers and others to compete with the specialists. We predict that shortly there will be a great outcry in Britain amongst beekeepers against the policy now pursued by the British Beekeepers' Association and the *British Bee Journal*. We are pleased to hear of such encouraging prospects for your coming season, and wish you every success.—ED.]

BEE GOSSIP.

BY O. POOLE.

NEW ONE-PIECE SECTIONS.—Several new modifications of the one pound section have recently been brought out in England, some of which have been patented. The object aimed at in all has been an easier and more expeditious method of fixing the comb foundations and inducing the bees to fill the sections with comb without the unsightly pop-holes at the bottom and sides. Everyone must admit, in fact it goes without saying, that a full section of comb is a much more saleable article—leaving out the question of weight and safety in travelling—than a partially filled one which is generally the case when starters are used or sheets of foundation which do not almost touch the bottom and sides of the section.

* * * *

In a large apiary worked for comb-honey the saving of time effected in being enabled to put the section together and insert the comb-foundation at the same time will be considerable, and although the Parker foundation-fixer has done some good service in the past, yet I think the new arrangements have many advantages; the foundations may be more firmly fixed and are less liable to curl or warp, or drop out of the section as at present, and the objectionable pop-holes entirely avoided.

* * * *

Two of these new sections will, I believe, be put upon the New Zealand market during the coming season, and, I trust, will be given a fair trial by beekeepers generally. The first is the invention of Messrs Abbott Brothers, and is thus described in the *British Bee Journal* of February 8.

* * * *

'The top section is cut at an angle with a cutter which leaves the top of cut longer than the bottom, thus forming a dovetail for wax when inserted. The cut being left at an angle and the right hand half of the section being still unfolded enables you to put the foundation in without the least trouble; then, by closing the top half of the section down into its place, a perfect tightening pressure is formed which forces the wax into proper position. Sections can be folded and waxed by this method at the rate of twelve a minute. No appliance whatever is required.'

* * * *

The other section alluded to has been patented by Mr Blow, of Welwyn, Herts, England, although the invention is also claimed by an American apiarist, Mr Bray. In this case a groove is cut right round the section, so that the foundation may entirely fill it. Of course in this case a block will have to be used in putting the section together.

* * * *

Several other sections have been brought out, but as these are the only two which are, I believe, likely to be introduced to New Zealand during the coming season, I have not troubled to mention them.

* * * *

DEATH OF MAJOR VON HRUSCHKA.—I notice in the late files of bee journals the death of a great benefactor of modern beekeeping recorded. Major von Hruschka, as doubtless the majority of your readers are aware, was the inventor of the honey extractor, second only in importance to the movable comb-hive. Without the extractor, the frame hive would not have been half as valuable as it is to-day, and the beekeeping industry could not have reached its present importance. Just imagine, you who have taken to beekeeping during the last few years and found everything ready to your hand, the difficulties many of us older beekeepers had to contend with. Fancy, if you can, the messy job of straining and squeezing combs to get the honey that fell to our lot, and you will appreciate the advantages of the modern system.

* * * *

Major von Hruschka exhibited his first honey extractor at Brüem, in Germany, in 1865, before a meeting of beekeepers, and received an address of thanks for his important discovery. At one time the Major was an extensive beekeeper and a frequent contributor to bee periodicals; but for some years previous to his death, which took place at Venice, on the 11th of May last, he had retired from the bee world and ceased to take an active

part in apicultural matters. His name will always be connected with advanced beekeeping.

* * * *

As others see us.—I was pleased to see in a late issue of the *Queenslander*, one of our leading colonial weeklies, a very favourable notice of our *Journal*. The editor of the apiary department, in an able article reviewing the work accomplished by the Queensland Beekeepers' Association during the two years of its existence, advocates a different policy in the future. He contends that the Association has been working "rather much in the direction of the mistaken philanthropic basis of the British Beekeepers' Association—namely, to spread an interest in beekeeping, instead of increasing the use of honey," and strongly advises the Association to "bestir itself" and follow the advice given by our worthy editor in the May number of this *Journal*.

* * * *

Twenty Pounds Reward.—Major Shallard, of New South Wales, who, it will be remembered, took a prominent part a short time ago in exposing some samples of adulterated honey in Sydney, is now offering the above reward in one of the Sydney papers to any person who can produce a sample of adulterated honey bearing his name, and I presume he means put up by him. Evidently someone is retaliating and making it warm for Major Shallard. Such is the result of doing a public service.

* * * *

The National Beekeepers' Union.—The *American Bee Journal* for July 11th contains a report of the third year's work of the above useful institution. Many of my readers may not be aware how the Union came to be formed, or its objects. A brief explanation will therefore be of use. Some three years ago a sheep farmer in one of the American States sued a neighbouring beekeeper for heavy damages on the plea that the latter's bees had caused the death of some sheep by driving them off their pasture, and otherwise annoying them. Apparently, the object of the farmer was to get rid of his beekeeping neighbour, quite apart from the sheep business, and he took this trumpery course to effect his object.

* * * *

Now, the sheep farmer was very much better off than his neighbour, and no doubt would have gained his point by swamping the latter with law costs had not some of the leading beekeepers seen that to lose a frivolous case like this would be almost a death-blow to the beekeeping industry throughout the States, as it would have set up a precedent, and every beekeeper would be at the mercy of his neighbours. The journals took up the matter, a sum sufficient to procure the best legal talent to defend the case was subscribed, and a victory was scored in favour of the beekeeper. A union was then formed to provide funds to defend all similar cases that might crop up, and the institution has done a great deal of good for the industry since its inauguration.

* * * *

The report gives particulars of several cases the union has defended on account of its members, and shows how the union has forced not only the now celebrated Professor Wiley, but also lawyers, doctors, and ministers to recant all they have said in connection with artificial comb-honey. The union has paid away principally in defending cases against beekeeping during the year ending June 30, 1888, $305.45, and the balance in hand on the same date was $258.27. Long may the Union flourish!

* * * *

Mildness of the Auckland Winter.—As a proof of the mildness of the past season, I may mention that a small colony of bees have successfully passed the winter months at Devonport on three combs in a glass observatory hive. The queen has for some time been busily laying, and at present they have every appearance of doing well.

* * * *

Early Swarm.—A large swarm of bees were discovered in a garden at Remuera on Saturday, September 7th, weighing nearly seven pounds. Swarming at such an early date is, I believe, a very unusual occurrence, and when removed by me three days after from a temporary box in which they had been placed to a Langstroth hive, they had already built nearly 80 square inches of comb.

* * * *

Do Bees Select a New Home before Swarming?—This is a question of great importance to beekeepers, and one which during the forthcoming season should not be lost sight of, as proper precautions may possibly save the loss of valuable swarms and queens. That bees often do select a new home before swarming by means of scouts sent out beforehand, I have not the slightest doubt; but that they do so invariably, which is often alleged by writers on this subject, I must deny. I remember once passing an old pollard elm tree, and seeing several bees busily engaged hovering around the holes I got a ladder, and ascended, thinking a swarm might be located there, but the few bees present only seemed to be examining the place, and thinking they were only after some juices that might exude from the tree, I took no further notice. On passing the same tree a few days later I observed many more bees, and on further examination found that a swarm had taken possession of this hollow tree, which proved conclusively to my mind that the bees I had previously seen were simply scouts sent out to select a habitation for the expectant swarm. Attempts to capture this colony proved abortive; in fact, it could only be done by cutting off the head of the tree, and to this the owner objected.

* * * *

On another occasion I recollect my best stock swarming, headed by a choice imported Ligurian queen. In this case they alighted in a potato patch a few yards from the hive. As the branches of the potato were not strong enough to bear the weight of the swarm, the whole of them were nearly on the ground. As I did not happen to have a frame hive ready, I immediately hived them in a straw-skep, into which they readily entered. I then shaded them with a sheet, and about half

an hour afterwards, and whilst preparing a better hive for their reception, a friend called with the intelligence that a swarm had passed over his head about a mile distant, and had taken possession of a hollow tree. "Well," said I, "directly I have put my swarm all right I will attend to them." On going to put mine right, however, I found them gone. Thinking it might be my lost swarm, I at once proceeded to the spot indicated, and there found, sure enough, my beautiful swarm of Ligurians which I had so carefully hived about an hour before. In this case I obtained permission to cut off the head of the tree, and after some little trouble secured my bees.

* * * *

Now I think this proves that bees do occasionly send out scouts to look out a new home for the outcoming swarm, and shows the necessity of hiving and removing to their new stand the swarm as quickly as possible after clustering in cases such as I have mentioned. I believe the bees merely cluster for a rest, or to gather together their scattered forces, as it were, and then the scouts go forth to reconnoitre for the last time to see that all is well in the proposed new habitation. Consequently, if the swarm be hived as soon as the bees cluster, and during the absence of the scouts, there will be much less chance of their being lost.

* * * *

RECIPE.—I enclose the following recipe which I have taken the liberty of clipping from one of your contemporaries:—For invalids, one of the most nourishing drinks known is composed as follows: An egg and two tablespoonsful of honey, beat up together, then add two tablespoonsful of good whisky and the same quantity of cream, stir well together, and the result is a drink that beats creation; but the dose must not be repeated oftener than once an hour. For weak stomachs, one-half the above quantity of liquids, that is, one tablespoonful of each, will be enough. This most wholesome, life-giving mixture is said to be simply delicious.

[The above was unavoidably crowded out of our last issue.—ED.]

Correspondence.

[These columns are open for the discussion of all matter connected with Apiculture, but the Editor does not hold himself responsible for the opinions expressed by his correspondents, who will please give their name and address, not necessarily for publication. When referring to any previous communication, please quote month and page.]

AUSTRALASIAN BEE MANUAL.

TO THE EDITOR OF THE AUSTRALASIAN BEE JOURNAL.

SIR,—I have before me a volume dated 1887, published in London, the title of which is "The Best Book," a classified dictionary of the best 25,000 books, by Wm. Swan Sonnenschein, of Paternoster Square, London. And thinking that you may possibly not have had an opportunity to see the same, I am very pleased to draw your attention to the fact that your *Australian Bee Manual* stands fifth in a list of eleven books on "Bees and Beekeeping," as selected by the author. I think we may certainly be allowed to congratulate you on so important a fact. I am sure our bee community throughout the colonies will unite (when such a fact becomes more generally known) to do you honour by demanding a new edition of your very valuable work.

Catalogue Note—

HOPKINS, ISAAC, *Australian Bee Manual.*

143 illustrations. 6s. c. 8vo., Auckland. 1st Editon, 1881; 3rd Edition, 1886.

The following is the list:—Bevan, Dr. E., Cheshire, F., Cook, A., Danyell, A. S., Hopkins, Isaac, Hunter, J., Langstroth, L. L., Pettigrew, A., Robinson, J. F., Taylor and Watts, H.

I trust you will see that a note is made of this in your *Journal.*—I am, dear sir, yours truly,

MIORO.

Remuera, August 1, 1888.

[We thank our correspondent for drawing our attention to the matter, for we were not aware that our *Manual* had received such distinguished notice.—ED.]

APIFUGE.

TO THE EDITOR OF THE AUSTRALASIAN BEE JOURNAL.

SIR,—I had a good opportunity of testing the apifuge I got from you. A hive by accident was capsized and I did not discover it till some time after. The bees were fairly mad and darted on to my hands and face in dozens. Had I gone to them with only a smoker I must have been badly stung, but the apifuge acted as a charm, each bee as he alighted on me and came under its influence beat a hasty retreat. I am very pleased with it as you may believe.—Yours truly,

C. B. M.

August, 1888.

TO OUR SUBSCRIBERS.

THE *Journal* is posted to every subscriber on the day of publication, but should any go astray, we will gladly post another copy if notified before the edition is exhausted.

Those who have not received the whole of their copies in due course please notify us at once.

PRINTED for the Proprietors and Publishers, HOPKINS, HAYR, AND CO., of Lower Queen-street, Auckland, by HENRY BRETT, of Auckland, at his Printing Office, Shortland-street, Auckland, October, 1888.